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Robert K. Barr

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EXAMINER

JOHNSON, CONNIE P

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT K. BARR, JAMES T. FAHEY,
COREY O’CONNOR, and JAMES G. SHELNUT

Appeal 2010-002119
Application 10/773,989
Technology Center 1700

Before TERRY J. OWENS, BEVERLY A. FRANKLIN, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s rejection of claims 1, 2, 4-7, 10, 19, and 20, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

The Invention

The Appellants claim a three-dimensional imaging method. Claim 1 is illustrative:

1. A method comprising:

c) applying an imaging composition comprising one or more cyclopentanone based conjugated photosensitizers and one or more reducing agents chosen from quinone compounds and acyl esters of triethanolamines to a work piece; and

d) projecting a 3-D image with a laser onto the imaging composition at 5 mW or less to affect a color or shade change in the imaging composition to form an image on the imaging composition.

The References

Kuchta	5,112,721	May 12, 1992
Weed	2002/0064728 A1	May 20, 2002
Kaufman	6,547,397 B1	Apr. 15, 2003
Parker	6,618,174 B2	Sep. 9, 2003

The Rejections

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 2, and 4 over Weed in view of Kuchta, Kaufmann, and the Appellants' admitted prior art, and claims 5-7, 10, 19, and 20 over Kaufman in view of Parker, Weed, Kuchta, and the Appellants' admitted prior art.

OPINION

We reverse the rejections.

Issue

Have the Appellants indicated reversible error in the Examiner's determination that Weed, Kuchta, and Kaufmann would have rendered prima facie obvious, to one of ordinary skill in the art, projecting Kaufman's

three-dimensional image onto an imaging composition suggested by Weed and Kuchta?

Findings of Fact

Weed discloses photopolymerizable and photoimageable compositions containing dyes that absorb strongly in the near infrared region and are useful as efficient photosensitizers for hexaarylbiiimidazole (HABI) photoinitiators (§§ 0007-0008). The compositions “may be used to prepare photoresists, soldermasks, printing plates, and proofing products” (§ 0099).

Kuchta discloses “photopolymerizable compositions that absorb in the visible region of the spectrum” (col. 1, ll. 9-10). The compositions include an HABI photoinitiator, a sensitizer, and a co-sensitizer which can be a cyclopentanone based conjugated photosensitizer (col. 2, l. 9 – col. 3, l. 43). The initiator system “enhances both the photospeed of the composition and the resolution of the resulting image” (col. 10, ll. 61-63). The compositions “are particularly useful in dry film photoresists and in solder masks” (col. 10, ll. 65-66). The exemplified applications are making printed circuits and lithographic printing plates and coating polymer films (col. 9, l. 67 – col. 10, l. 38).

Kaufman discloses “a rapidly scanning laser system utilizing a three-dimensional data set projected onto contoured surfaces that incorporates a laser range finding system for accurately determining the distance to the contoured surfaces” (col. 1, ll. 14-17). Kaufman’s exemplified uses of laser projectors are for positioning workpieces in the manufacture of leather products, roof trusses, airplane fuselages and the like, and for locating templates or paint masks during the painting of aircraft (col. 1, ll. 20-30).

Analysis

The Appellants argue that “Kaufman et al. alone or in combination with Weed et al. or Kuchta do not suggest the desirability of modifying Kaufman et al. to include a photoimageable composition on the contoured surface of Kaufman” (Br. 9).

The Examiner argues that “[a]lthough Kaufman may not teach an imaging composition, one of ordinary skill in the art would modify the Kaufman reference to include the imaging composition of Weed because Kaufman teaches a laser system for imaging composition while Weed teaches the imaging composition” (Ans. 8). The Examiner states that “it is expected that [Kaufman’s] 3D image would be selectively placed on the image composition by using a laser projector with a range finder” (Ans. 4).

Establishing a prima facie case of obviousness of an invention comprising a combination of known elements requires “an apparent reason to combine the known elements in the fashion claimed.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

The Examiner’s rejection appears to be based upon the Examiner’s interpretation of Kaufman as disclosing a system which projects an image onto an imaging composition, such that all that is lacking from Kaufman’s disclosure is the Appellants’ particular imaging composition. The Examiner, however, has not pointed out where Kaufman discloses projecting an image onto an imaging composition. Kaufman’s disclosed uses of image projection are for locating positions, such as workpiece part positions or positions of templates or paint masks during the painting of aircraft (col. 1, ll. 13-51). The Examiner has not addressed the differences between those uses of Kaufman’s image projection and the uses set forth above of the

imaging compositions of Weed (¶ 0099) and Kuchta (col. 9, l. 67 – col. 10, l. 38; col. 10, ll. 65-66) and explained why, regardless of those differences, the applied prior art would have provided one of ordinary skill in the art with an apparent reason to project Kaufman's image onto an imaging composition.

Conclusion of Law

The Appellants have indicated reversible error in the Examiner's determination that Weed, Kuchta, and Kaufmann would have rendered prima facie obvious, to one of ordinary skill in the art, projecting Kaufman's three-dimensional image onto an imaging composition suggested by Weed and Kuchta.

DECISION/ORDER

The rejections under 35 U.S.C. § 103 of claims 1, 2, and 4 over Weed in view of Kuchta, Kaufmann and the Appellants' admitted prior art, and claims 5-7, 10, 19, and 20 over Kaufman in view of Parker, Weed, Kuchta, and the Appellants' admitted prior art are reversed.

It is ordered that the Examiner's decision is reversed.

REVERSED

sld

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